

FOREST SHORES ASSOCIATION (PWSNO 1280245) SOURCE WATER ASSESSMENT REPORT

December 5, 2000



State of Idaho Department of Environmental Quality

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Source Water Assessment for Forest Shores Water Association

Under the Federal Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. The Idaho Department of Environmental Quality is completing the assessments for all Idaho public drinking water systems. The assessment for your particular drinking water source is based on a land use inventory within a 1,000 foot radius of your drinking water source, sensitivity factors associated with the source and characteristics associated with either your aquifer or watershed in which you live. The Forest Shores Water Association elected not to participate in the potential contaminant inventory.

This report, *Source Water Assessment for Forest Shores Water Association*, describes the public drinking water system, potential contaminant sources identified within a 1000-foot boundary around the drinking water source, and the susceptibility (risk) that may be associated with any potential contaminants. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this system. **The results should not be used as an absolute measure of risk and are not intended to undermine the confidence in your water system.**

The Forest Shores Water Association drinking water source is a 300-foot deep well. The water system serves 14 homes located on the south shore of Rockford Bay on Lake Coeur d'Alene. Forest Shores water is tested quarterly for microbial contamination and yearly for nitrates. Coliform bacteria have been absent in all samples since testing began in 1993. Nitrates have been detected every year since 1994 in concentrations ranging between 0.075 mg/l and 0.135 mg/l. The Maximum Contaminant Level (MCL) for Nitrate is 10.0 mg/l.

A susceptibility analysis conducted December 5, 2000 ranked the risk of contamination of the well low. Available maps of the water system show a private road crossing the well lot and public roads within the 1000 feet of the well, but do not document the location of septic systems. Septic systems, potential sources of microbial and nitrate contamination, become a concern if any of their components impinge on the sanitary setback for the well, or if there are more than 10 individual systems in any 40 acre tract of land. A copy of the susceptibility analysis for your system along with a map showing the 1000-foot boundary around the well is included with this summary.

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a "pristine" area or an area with numerous industrial and/or agricultural land uses, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

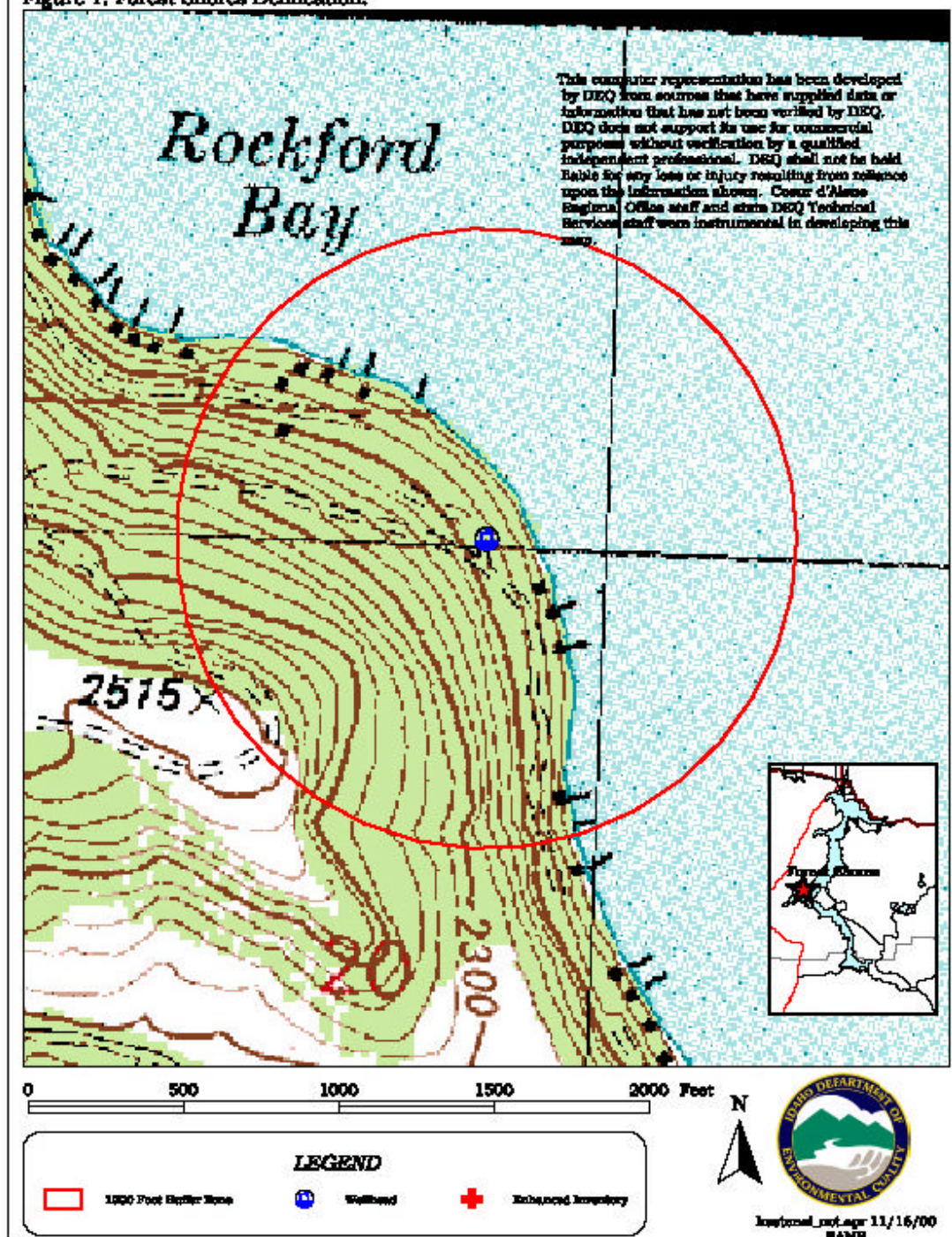
For Forest Shores Water Association, source water protection activities should focus first on required inspections of back flow prevention valves to protect the well from surface contaminants. The association needs to continue to maintain the 50-foot well lot free of herbicides, pesticides and fertilizers and may want to put identifying signs on the lot. The association should institute public education and information programs for its members aimed at reducing risks to the water supply from improperly used or stored yard and household chemicals. Given the number of lots within 1000 feet of the well, septic system maintenance is another important topic for public information efforts. Source water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term.

For assistance in developing source water protection strategies please contact (Regional Office Contact) at the Coeur d'Alene Regional DEQ office at 208 769-1422.

DEQ website:

<http://www.deq.state.id.us>

Figure 1. Forest Shores Delineation.



Attachment A

Forest Shores Association Susceptibility Analysis Worksheet

Ground Water Susceptibility Report

Public Water System Name : **FOREST SHORES ASSN**
Public Water System Number : **1280245**

Well# : **WELL #1**
12/5/00 1:33:11 PM

1. System Construction		SCORE			
Drill Date	8/2/84				
Driller Log Available	YES				
Sanitary Survey (if yes, indicate date of last survey)	YES	2000			
Well meets IDWR construction standards	NO	1			
Wellhead and surface seal maintained	YES	0			
Casing and annular seal extend to low permeability unit	YES	0			
Highest production 100 feet below static water level	NO	1			
Well located outside the 100 year flood plain	YES	0			
Total System Construction Score		2			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	NO	2			
Vadose zone composed of gravel, fractured rock or unknown	NO	0			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	YES	0			
Total Hydrologic Score		3			
3. Potential Contaminant / Land Use - ZONE 1A		IOC	VOC	SOC	Microbial
		Score	Score	Score	Score
Land Use Zone 1A	RANGELAND, WOODLAND, BASALT	0	0	0	0
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		0	0	0	0
Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	YES	0	0	0	0
(Score = # Sources X 2) 8 Points Maximum		0	0	0	0
Sources of Class II or III leachable contaminants or Microbials	YES	0	0	0	
4 Points Maximum		0	0	0	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B		0	0	0	0
Cumulative Potential Contaminant / Land Use Score		0	0	0	08
4. Final Susceptibility Source Score		5	5	5	5
5. Final Well Ranking		Low	Low	Low	Low

The final scores for the susceptibility analysis were determined using the following formulas:

- VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.27)
- Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.35)

Final Susceptibility Scoring:

- 0 - 5 Low Susceptibility
- 6 - 12 Moderate Susceptibility
- > 13 High Susceptibility.

POTENTIAL CONTAMINANT INVENTORY

LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as **Superfund** is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100-year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.